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10/032,843	12/27/2001	Craig Dillon	13553-06830	9057

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EXAMINER

BLACK, LINH

ART UNIT	PAPER NUMBER
2177	

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/032,843

Applicant(s)

DILLON ET AL.

Examiner

LINH BLACK

Art Unit

2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) 44 and 45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 and 46-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-60 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. 8.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-43 and 46-60, drawn to manipulating data structure (e.g., compression, compaction, compilation), classified in class 707, subclass 101.
  - II. Claim 44, drawn to database or data structure, classified in class 707, subclass 100.
  - III. Claim 45, drawn to generating database or data structure, classified in class 707, subclass 102.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I-IV are related as sub-combinations disclosed as usable together in a single combination. The sub-combinations are distinct from each other if they are shown to be separately usable. In the instant case, each of the respective inventions has a separate utility other than with the other invention. See MPEP § 806.05(d).

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3. Because these inventions are distinct for the reasons given above and the search required for group I is not required for the other groups, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
6. Applicants chose group 1 (claims 1-43, and 46-60) according to the restriction requirement, and cancelled claims 44-45.

***Oath/Declaration***

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

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Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c). Applicants' residences are altered and are not initialed.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-31, 33-43, 46-56, 58-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Mikurak (USP 6606744).

7. Mikurak anticipated the independent claims 1 and 46-48 by the following:

a) a source database comprising structured data – col. 80, line 63 to col. 81, line 11.

b) a reference database having reference data – col. 15, lines 20-40; col. 63, lines 18-31; col. 101, lines 15-31.

c) a locator component configured to use the structured data to locate reference data in the reference database suitable for association with the source database - col. 180, line 50 to col. 181, line 16; col. 187, line 60 to col. 188, line 42; col. 259, lines 10-51.

d) an analyzer component configured to process the reference data into a set of descriptors and associating the descriptors to the source data to form an augmented database – col. 80, line 63 to col. 81, line 62; col. 98, line 54 to col. 99, line 26.

e) a predictive modeling component configured to classify behavior with the augmented database – fig. 52; col. 81, lines 44-55; col. 140, line 60 to col. 141, line 15.

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f) a data mining component configured to conduct searches of data in the augmented database – fig. 52; col. 35, lines 20-26; col. 79, line 46 to col. 81, line 63.

2. Mikurak anticipated claims 2 and 49 by the following:

wherein the source database contains financial transaction data – col. 96, lines 29-54; col. 112, lines 31-65.

3. Mikurak anticipated claim 3 by the following:

wherein the source database contains telephone call detail records – col. 2, line 53 to col. 3, line 3; col. 39, line 33 to col. 40, line 16; col. 58, lines 30-40.

wherein the reference database contains business indices and telephone directories augmented by public information on merchants and service providers – col. 78, lines 29-44; col. 181, line 51 to col. 182, line 10.

4. Mikurak anticipated claim 4 by the following:

wherein the source database contains investment transactions – col. 78, lines 29-44; col. 80, line 63 to col. 81, line 11; col. 209, lines 1-42.

the reference database contains public information regarding companies, mutual funds and/or other investment interests - col. 15, lines 20-40; col. 63, lines 18-31; col. 101, lines 15-31; col. 159, lines 34-64.

5. Mikurak anticipated claim 5 by the following:

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wherein the source database contains insurance transactions; wherein the reference database contains information regarding insurance products, claims and/or insurance evaluations – col. 101, line 32 to col. 102, line 27; col. 239, lines 29-38.

6. Mikurak anticipated claim 6 by the following:

wherein the source database contains product inventories - col. 80, line 63 to col. 81, line 11.

wherein the reference database contains information describing products - col. 15, lines 20-40; col. 63, lines 18-31; col. 101, lines 15-31.

7. Mikurak anticipated claim 7 by the following:

wherein the source database contains Internet browser view transactions – col. 100, line 51 to col. 101, line 31.

wherein the reference database contains the Internet pages of the browser view transactions – col. 108, line 3-49.

8. Mikurak anticipated claim 8 by the following:

wherein the source database contains retail transactions at an individual product level – col. 110, lines 16-42.

wherein the reference database contains product information from catalogs – fig. 101; col. 95, lines 20-60.

9. Mikurak anticipated claims 9 and 50 by the following:

wherein the structured data comprises at least a name or identifier corresponding to a merchant, product and/or service – col. 159, lines 20-33; col. 181 to col. 182, line 10.

10. Mikurak anticipated claims 10 and 51 by the following:

wherein the reference database contains data in an unstructured format – col. 112, line 43 to col. 113, line 43.

11. Mikurak anticipated claims 11 and 52 by the following:

wherein the reference database comprises a public database such as the Internet – col. 63, line 18-31; col. 79, lines 29-45; col. 101, lines 9-31.

12. Mikurak anticipated claims 12 and 53 by the following:

wherein the locator component locates electronic pages on the Internet related to merchant, product and/or service identified of the structured data in the source database – col. 78, lines 29-44; col. 95, lines 33-60; col. 108, lines 3-62.

13. Mikurak anticipated claims 13 and 54 by the following:

wherein the locator component includes a spider module that searches for embedded links, keywords and/or references in the text found at the located electronic pages – col. 259, lines 19-27; col. 187, line 60 to col. 188, line 18.



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14. Mikurak anticipated claims 14 and 55 by the following:

wherein the locator component retrieves the natural language text from the located electronic pages – col. 158, line 62 to col. 159, line 52; col. 95, lines 20-60.

15. Mikurak anticipated claims 15 and 56 by the following:

wherein the processing of reference data in the reference database is accomplished by reducing the natural language text to a set of weighted keywords – col. 96, lines 29-54; col. 99, line 1-60; col. 181, line 51 to col. 182, line 10.

16. Mikurak anticipated claims 17 and 58 by the following:

wherein the predictive modeling module uses one or more of the following methodologies: model-based regression, non-parametric regression (e.g., neural networks), Bayesian inference, hidden Markov models, fuzzy logic models, evolutionary models, or decision trees - fig. 52; col. 81, lines 44-55; col. 140, line 60 to col. 141, line 15.

17. Mikurak anticipated claims 18 and 59 by the following:

wherein the source database comprises account based transactional records and the analyzer component aggregates the data from the source database and its associated reference data by reference to an account field – fig. 26; col. 47, lines 54-63; col. 103, lines 10-40.

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18. Mikurak anticipated claims 19 and 60 by the following:

wherein the association of unstructured data from the reference database is delivered through a predictive statistical model built from known historic outcomes associated with records within the source database – fig. 52; col. 81, lines 44-55; col. 140, line 60 to col. 141, line 15; col. 158, line 52-61.

19. Mikurak anticipated independent claim 20 by the following:

a) a source database comprising a plurality of transaction data records with each transaction data record having at least one field identifying a merchant, product and/or service - col. 80, line 63 to col. 81, line 11.

b) a merchant identifier database comprising a plurality of reference addresses and value description identifiers for merchants, products and/or services – col. 96, lines 29-67; col. 224, lines 48-67.

c) a reference database - col. 15, lines 20-40; col. 63, lines 18-31; col. 101, lines 15-31.

d) an address locating module configured to search the reference database to locate references for merchants, products and/or services identified in the source database - col. 180, line 50 to col. 181, line 16; col. 187, line 60 to col. 188, line 42; col. 259, lines 10-51.

e) an account description database; f) a transaction augmentation module, configured to attach the value description of a particular merchant, product and/or service to the transaction data records and store the resulting combined record in the account description database – col. 89, lines 9-65; col. 99, lines 37-60; col. 292, lines 33-55; col. 223, lines 31-67.

g) a merchant analysis builder module configured to condense the references provided by the address locating module into a value description and store the value description in the merchant identifier database – col. 101, lines 9-31; col. 224, lines 11- 46; col. 180, line 50 to col. 181, line 16.

20. Mikurak anticipated claim 21 by the following:

an account descriptor builder module configured to generate descriptive account records from the merchant identifier database and the source database – col. 47, lines 54-63; col. 187, line 60 to col. 188, line 42; col. 259, lines 10-51.

21. Mikurak anticipated claim 22 by the following:

a lexicographic database configured to index value description identifiers to keywords - col. 96, lines 29-54; col. 99, line 1-60; col. 181, line 51 to col. 182, line 10.

22. Mikurak anticipated claim 23 by the following:

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wherein the reference database comprises the Internet - col. 15, lines 20-40; col. 63, lines 18-31; col. 101, lines 15-31.

23. Mikurak anticipated claim 24 by the following:

a predictive modeling module configured to predict future behavior of accounts, merchants, or other entities, using data from the account description database - fig. 52; col. 81, lines 44-55; col. 140, line 60 to col. 141, line 15.

24. Mikurak anticipated claim 25 by the following:

a data mining search engine configured to conduct keyword searches of the account description database to identify accounts, merchants, or products – col. 79, line 45 to col. 80, line 66; col. 81, lines 5-62.

25. Mikurak anticipated independent claim 26 by the following:

a) retrieving at least one data record recording an event from the source database – col. 44, lines 53-62; col. 96, lines 51-63; col. 112, lines 47-65.

b) identifying a field in the data record that specifies an entity – col. 48, lines 1-10; col. 113, lines 14-67; col. 225, lines 15-46.

c) locating reference data from the reference database that describes the entity specified by the entity field - col. 180, line 50 to col. 181, line 16; col. 187, line 60 to col. 188, line 42; col. 259, lines 10-51.

d) processing the reference data to form a set of keyword descriptors describing the entity - col. 80, line 63 to col. 81, line 62; col. 98, line 54 to col. 99, line 26.

e) augmenting the data record with the keyword descriptors to generate an augmented data record describing the entity – **col. 47, line 54 to col. 48, line 10; col. 80, lines 25-66; col. 80, line 63 to col. 81, line 62; col. 98, line 54 to col. 99, line 26; col. 241, lines 38-55.**

f) building an account descriptor database that includes at least one data record that correlates the at least one event with the description of the entity from the augmented data record – col. 44, lines 32-67; col. 62, lines 9-21; col. 254, lines 47-62; col. 299, lines 40-61.

g) searching the account descriptor database for selected data records that meet a desired criteria – col. 44, lines 49-62; col. 79, lines 54-63; col. 129, line 50 to col. 130, line 16.

26. Mikurak anticipated claim 27 by the following:

wherein the locating reference data includes locating data in an unstructured database - col. 112, line 43 to col. 113, line 43.

27. Mikurak anticipated claim 28 by the following:

wherein the reference database includes at least a portion of the Internet – col. 97, line 25 to col. 98, line 11; col. 135, lines 3-18.

28. Mikurak anticipated claim 29 by the following:

wherein the locating reference data includes locating electronic pages using the entity specified in the at least one data record - col. 180, line 50 to col. 181, line 16; col. 187, line 60 to col. 188, line 42; col. 259, lines 10-51.

29. Mikurak anticipated claim 30 by the following:

wherein locating reference data further spidering for additional electronic pages cited within the located electronic pages - col. 259, lines 19-27; col. 187, line 60 to col. 188, line 18.

30. Mikurak anticipated claim 31 by the following:

wherein locating reference data includes reducing natural language text to keyword descriptors - col. 80, line 63 to col. 81, line 62; col. 98, line 54 to col. 99, line 26.

31. Mikurak anticipated claim 33 by the following:

storing the augmented data record in a merchant database - col. 101, lines 9-31; col. 224, lines 11- 46; col. 180, line 50 to col. 181, line 16.

32. Mikurak anticipated independent claims 34 and 40 by the following:

a) reading a data record from the source database – col. 171, lines 1-20; col. 239, lines 15-29; col. 80, line 63 to col. 81, line 11.

b) searching the reference database for information describing the data record - col. 44, lines 49-62; col. 79, lines 54-63; col. 129, line 50 to col. 130, line 16.

c) condensing the information describing the data record into at least one keyword description - col. 80, line 63 to col. 81, line 62; col. 98, line 54 to col. 99, line 26

d) augmenting the data record with the keyword description - col. 96, lines 29-54; col. 99, line 1-60; col. 181, line 51 to col. 182, line 10; fig. 52; col. 81, lines 44-55.

33. Mikurak anticipated claims 35 and 41 by the following:

wherein the reference database comprises the Internet - col. 15, lines 20-40; col. 63, lines 18-31; col. 101, lines 15-31.

34. Mikurak anticipated claim 36 and 42 by the following:

wherein the data record contains at least a merchant name or identifier - col. 159, lines 20-33; col. 181 to col. 182, line 10.

35. Mikurak anticipated claims 37 and 43 by the following:

wherein searching the reference database further includes locating electronic pages related to the merchant identified in the data record - col. 180, line 50 to col. 181, line 16; col. 187, line 60 to col. 188, line 42; col. 259, lines 10-51.

36. Mikurak anticipated claim 38 by the following:

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wherein searching the reference database further includes retrieving the natural language text from the located electronic pages - col. 158, line 62 to col. 159, line 52; col. 95, lines 20-60.

37. Mikurak anticipated claim 39 by the following:

wherein condensing the information comprises reducing the natural language text to at least one weighted keyword - col. 96, lines 29-54; col. 99, line 1-60; col. 181, line 51 to col. 182, line 10.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

38. Claims 16, 32, and 57 rejected under 35 U.S.C. 103(a) as being unpatentable over Mikurak (USP 6606744), and further in view of Everling et al. (USPAP 2001/0016833).

As per claims 16 and 57, Mikurak et al. do not explicitly suggest zip code and/or standard industry code. However, Everling et al. teach merchant transaction data mining method – the title. Everling et al. teach zip code and/or standard industry code – paragraphs 0019-0021. Thus, it would have been obvious to one of ordinary skill in the



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art at the time of the invention to combine Mikurak's teaching with Everling et al.'s teaching in order to study/analyze/validate/use the information provides by zip code and/or SIC to improve the network-based supply chain environment such as better source-specific regulations or market study of specific regions, or improvement of shopping processes.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH BLACK whose telephone number is 703-305-0317. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Linh Black*

LINH BLACK  
Examiner  
Art Unit 2177

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